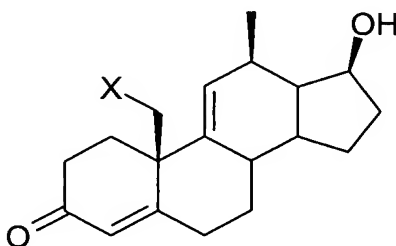


This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Withdrawn) 17 β -Hydroxy-19-halogen-androsta-4,9(11)-dien-3-ones of general formula I,



I

in which X = a halogen radical or a radiohalogen radical.

2. (Withdrawn) 17 β -Hydroxy-19-halogen-androsta-4,9(11)-dien-3-ones according to claim 1, characterized in that X = Br, I, ¹²⁵I, ¹³¹I, ⁸²Br or ⁷⁷Br.

3. (Withdrawn) 17 β -Hydroxy-19-halogen-androsta-4,9(11)-dien-3-ones according to claim 1, characterized by

- 17 β -Hydroxy-19-iodo-androsta-4,9(11)-dien-3-one,
- 17 β -Hydroxy-19-¹²⁵I-iodo-androsta-4,9(11)-dien-3-one or
- 19-Bromo-17 β -hydroxy-androsta-4,9(11)-dien-3-one.

4. **(Withdrawn)** Process for the production of 17β -hydroxy-19-halogen-androsta-4,9(11)-dien-3-ones of general formula I according to claim 1, wherein starting from 3,3-(2,2-dimethyl-trimethylenedioxy)- 10β -formyl-androst-9(11)-ene- 5α , 17β -diol

- a) The C- 17β -hydroxy group is protected by silylation,
- b) The 10β -formyl group is reduced to the C-19-hydroxy compound,
- c) The thus produced 17β -silylated-3,3-(2,2-dimethyl-trimethylenedioxy)-androst-9(11)-ene- 5α ,19-diol is reacted with elementary halogen or radiohalogen, selected from Br or I, to form 17β -silylated-3,3-(2,2-dimethyl-trimethylenedioxy)-19-halogen-androst-9(11)-en- 5α -ol,
- d) Water is cleaved off, and
- e) The thus produced isomer mixture that consists of 17β -silylated-3,3-(2,2-dimethyl-trimethylenedioxy)-19-halogen-androsta-5,9(11)-diene and 17β -silylated-3,3-(2,2-dimethyl-trimethylenedioxy)-19-halogen-androsta-4,9(11)-diene is mixed with a strong protonic acid for the formation of target compounds I.

5. **(Withdrawn)** Process according to claim 4, wherein the reduction to the C-19-hydroxy compound is carried out with sodium borohydride, lithium aluminum hydride or diisobutyl aluminum hydride.

6. **(Withdrawn)** Process according to claim 4, wherein the halogen or radiohalogen is added in a small excess.

7. **(Withdrawn)** Process according to claim 4, wherein the dehydration is carried out under standard conditions, preferably with thionyl chloride/pyridine.

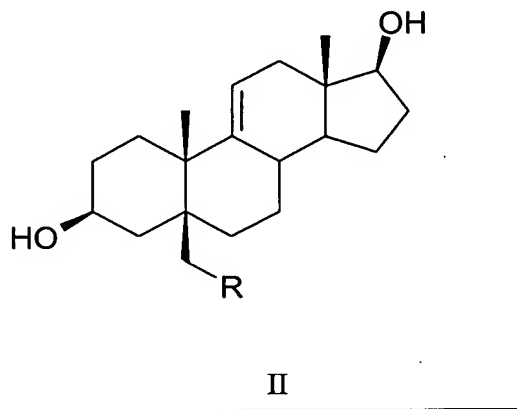
8. **(Withdrawn)** Process according to claim 4, wherein trifluoroacetic acid, sulfuric acid or methanesulfonic acid is used as a strong protonic acid.

9. **(Withdrawn)** Use of the compounds of general formula I according to claim 1 as a diagnostic agent.

R¹
conc.
10. **(Withdrawn)** Use according to claim 9 for graphic visualization of the prostate and for early detection of pathophysiological changes.

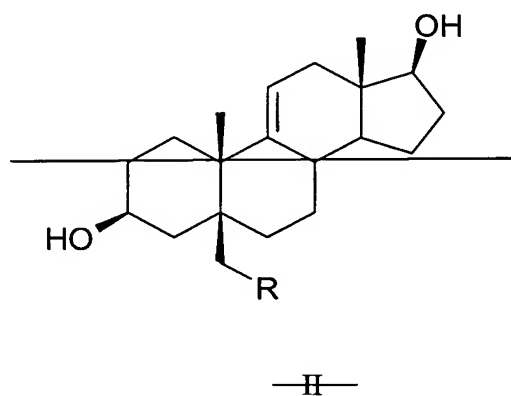
11. **(Withdrawn)** Use of the non-labeled compounds of general formula I according to claim 1 as starting products for the production of 5 β -substituted androst-9(11)-enes of general formula II with radical R in the meaning of: $R = -(CH_2)_n-CH_2-R^1$, $-(CH_2)_n-CH_2-OR^1$, $-(CH_2)_n-CH_2-OCOR^1$, $-(CH_2)_n-CH_2-SR^1$, $-(CH_2)_n-CH_2-NR^1R^2$, $-(CH_2)_n-CHO$, $-(CH_2)_n-CN$, in which n can assume the values of 0-5, and radicals R^1 and R^2 , independently of one another, stand for hydrogen or a straight-chain or branched, saturated or unsaturated hydrocarbon radical with up to 18 C atoms, whereby this radical optionally can contain additional functional groups and carbocyclic or heterocyclic ring elements.

12. (Currently Amended) ~~Compounds~~ A compound of general formula II with



wherein radical R ~~in the meaning of is:~~

R' / con.
 $R = -(\text{CH}_2)_n\text{-CH}_2\text{-R}^1, -(\text{CH}_2)_n\text{-CH}_2\text{-OR}^1, -(\text{CH}_2)_n\text{-CH}_2\text{-OCOR}^1, -(\text{CH}_2)_n\text{-CH}_2\text{-SR}^1,$
 $-(\text{CH}_2)_n\text{-CH}_2\text{-NR}^1\text{R}^2, -(\text{CH}_2)_n\text{-CHO}, -(\text{CH}_2)_n\text{-CN},$ in which n can assume the values of 0-5,
and radicals R^1 and R^2 , independently of one another, stand for hydrogen or a straight-chain
or branched, saturated or unsaturated hydrocarbon radical with up to 18 C atoms, whereby
this radical optionally can contain additional functional groups and carbocyclic or
heterocyclic ring elements.



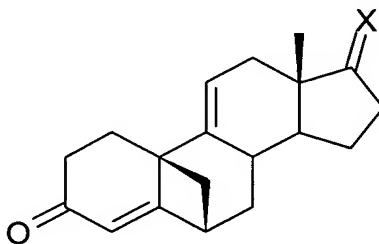
13. (Withdrawn) Process for the production of 5 β -substituted androst-9(11)-enes
of general formula II according to claim 12 by reaction of a compound of general formula I to

form 17 β -silyl ether Ia and further reaction with mercaptoacetic acid methyl ester for the formation of 17 β -silylated-3-oxo-2'H,5'H-thieno[3',4':5,10]-5 β -estr-9(11)-ene-2'ξ-carboxylic acid methyl ester, which then is reacted according to processes that are known in the art analogously to Diagram 2 to form the target compounds of Formula II.

14. **(Withdrawn)** Use of the compounds of general formula II according to claim 12 for treatment of androgen-dependent diseases.

15. **(Withdrawn)** Use of the non-labeled compounds of general formula I according to claim 1 as starting products for the production of 6 β ,19-cycloandrostadienes of general formula III, in which X = O or the grouping 17 β -OR, 17 α -H, with R in the meaning of H, C1-C10-alkyl, C1-C10-acyl, whereby the acyl radical is derived from an aliphatic or aromatic carboxylic acid.

16. **(Withdrawn)** 6 β ,19-Cycloandrostadienes of Formula III



III

in which

X = O or the grouping 17β -OR, 17α -H, with R in the meaning of H, C1-C10-alkyl, C1-C10-acyl, whereby the acyl radical is derived from an aliphatic or aromatic carboxylic acid.

17. **(Withdrawn)** Process for the production of the $6\beta,19$ -cycloandrosteradienes of Formula III according to claim 16, wherein a compound of general formula I is reacted to form 17β -silyl ether Ia and the latter is treated with a non-nucleophilic base in a solvent, and then the silyl ether is further cleaved off while a cyclosteroid of general formula III is obtained, and the latter then is optionally converted by standard processes, such as esterification, etherification, oxidation, into further compounds of general formula III.

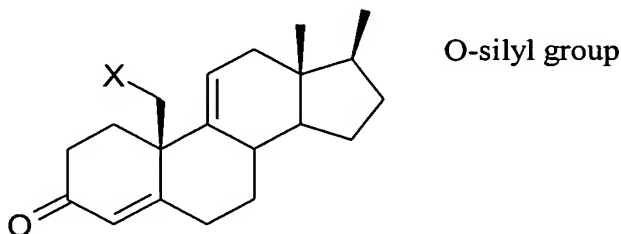
18. **(Withdrawn)** Process according to claim 17, wherein it is treated with sodium hydride, triethylamine, fluoride as a non-nucleophilic base.

19. **(Withdrawn)** Process according to claim 17, wherein the base treatment is carried out in an aprotic solvent.

20. **(Withdrawn)** Process according to claim 19, wherein the aprotic solvent is THF or DMF.

21. **(Withdrawn)** Use of the $6\beta,19$ -cycloandrosteradienes of general formula III according to claim 16 as an aromatase inhibitor and 5α -reductase inhibitor.

22. (Withdrawn) 17 β -Silyl ether of general formula Ia



Ia

in which X = halogen, selected from Br or I.

23. (Withdrawn) 17 β -Silyl ether according to claim 22, characterized by the
17 β -(tert-butyltrimethylsilyloxy)-19-halogen-androsta-4,9(11)-dien-3-ones, preferably
17 β -(tert-butyltrimethylsilyloxy)-19-iodo-androsta-4,9(11)-dien-3-one,
17 β -(tert-butyltrimethylsilyloxy)-19-bromo-androsta-4,9(11)-dien-3-one.

24. (New) A composition comprising a compound according to claim 12 and a
pharmaceutically acceptable carrier.

25. (New) A method of treating an androgen-dependent disease comprising
administering an effective amount of a compound according to claim 12.

26. (New) A compound according to claim 12, wherein R is an ethyl group.